

ABSTRACT

A flexible device comprises a metallic element including high strain portions and lesser strain portions, wherein the high strain portions are to be subjected to levels of strain during use increased with respect to strain levels in the lesser strain portions. The high strain portions comprise a material which, under predetermined operating conditions, is stabilized in a martensite phase and the lesser strain portions comprise a material which, under the predetermined operating conditions, is in an austenite phase. A method of forming an element of a medical device comprises the steps of forming an element of the device of Nitinol and impressing a memorized shape on the element, wherein the memorized shape is a shape the element is to assume when in an operational configuration. A high strain portion of the element is treated so that it is substantially Martensite phase stabilized under expected operating conditions of the device, wherein untreated portions of the element are in a substantially austenitic phase under the expected operating conditions.